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online data

SUPPLEMENTARY ONLINE DATA

Cystic fibrosis transmembrane regulator fragments with the Phe^{508} deletion exert a dual allosteric control over the master kinase CK2

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Table S1 Binding constants of β(181–203) peptide for the CK2α catalytic subunit

Injections of 35 μl of β-peptide solutions (10–200 μM) were performed over a sensor chip containing 1600 RU (relative units) of immobilized CK2α at a flow rate of 10 μl/min. The Langmuir 1:1 model was used to fit kinetic data. Association rate (k_a), dissociation rate (k_d) and dissociation constant ($K_D = k_d/k_a$) are reported.

Analyte	k_a ($M^{-1} \cdot s^{-1}$)	k_d (s^{-1})$\times 10^{-3}$	K_D (μM)
β(181–203)	406	3.43	8.45

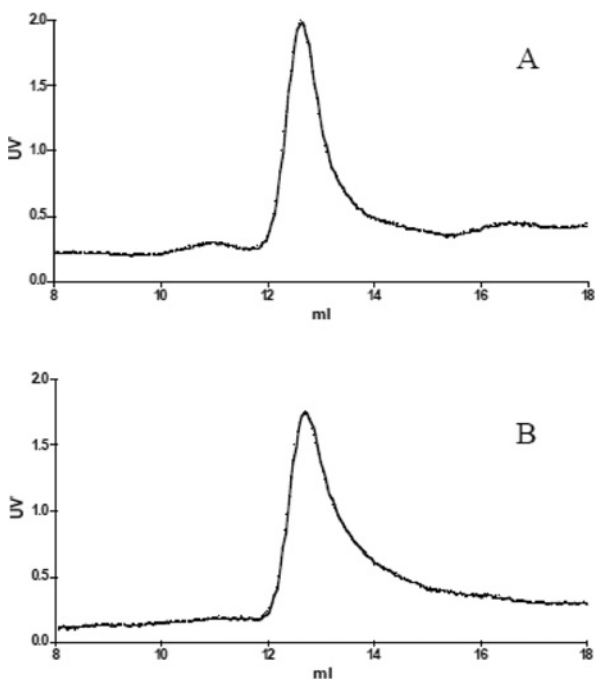

Figure S1 Size-exclusion chromatography analysis

CK2 holoenzyme (40 pmols) was pre-incubated at 30°C for 15 min in 50 mM Tris/HCl, pH 7.5, containing 100 mM NaCl and 12 mM $MgCl_2$ in the absence (**A**) or presence (**B**) of 4000 pmols of CFTR ΔF508 peptide. After the incubation, samples were loaded on Superdex 200 10/300 GL in AKTA purifier system (GE, Pharmacia). Runs were performed in 50 mM Tris/HCl, pH 7.5, 7 mM 2-mercaptoethanol and 0.5 M NaCl.

Figure S2 Sequence alignment of CFTRΔF508(500–518) peptide with histones H1 and H4

Alignment was performed by using MOE (Molecular Operating Environment) alignment tools (http://www.chemcomp.com/software.htm). Identical residues are reported in bold and denoted by asterisks. Conservative substitutions are underlined.

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